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Marketing Peaches

Canton-Youngstown Area

R. C. SCOTT and R. A. HIGGINS

OHIO AGRICULTURAL EXPERIMENT STATION

WOOSTER, OHIO

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MARKETING PEACHES

R. C. Scott and R. A. Higgins

INTRODUCTION

Peaches must be picked in a ripe state in order to be of the best eating quality. The perishable nature of peaches makes it difficult to market them in this condition. The grower who is located close to his market should have the best opportunity to furnish consumers with peaches in prime eating condition.

Most Ohio peach growers are located in the heart of, or near, an excellent market area. In addition, Ohio is a deficit peach producing state, consuming nearly twice as many peaches as were grown within the state in recent years.*

At times, however, many Ohio peach growers have had difficulty in marketing their peach crop. They have cited the competition of peaches from Michigan, Illinois, South Carolina and as far away as California. Some retailers have refused to handle Ohio peaches altogether and at times many have expressed some reservations over their purchase.

This study was conducted in an effort to find ways of improving the marketing of Ohio peaches. As an area with a ready local market and a concentration of local peach growers, the Columbiana, Mahoning, Stark, and Carroll Counties were chosen for the study. The marketing practices of growers, retailers and other distributors were studied. Retailers were interviewed to obtain their reactions to the handling of Ohio peaches, information about their merchandising practices, and suggestions as to what growers might do to improve the marketing of their fruit. Peaches were observed in retail stores, roadside stands, and at packing sheds. The work was conducted by the Ohio Agricultural Experiment Station, in cooperation with the Ohio Agricultural Extension Service, and The Ohio State University.

Area Studied

The study was carried on in the Canton-Youngstown area of Ohio, including the cities of Alliance, Canton, Salem and Youngstown. This area is located in the northeastern part of the state and is highly industrialized.

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*Consumption was computed from **Consumption of Food in the United States, 1909-1948**, U. S. D. A. Production estimates from **Crop Production, 1949 Annual Summary**, B. A. E., U. S. D. A. and **Agricultural Statistics 1948**, U. S. D. A.

The Canton-Youngstown area is a relatively important peach producing section in Ohio. Mahoning, Columbiana, Stark and Carroll counties rank fourth, fifth, eighth and nineteenth respectively in number of peach trees of the 88 counties in Ohio, as reported in the 1945 Census of Agriculture. Ottawa County, with 301,402 trees ranked first, followed by Lake County with 80,804 trees and Ashtabula County with 69,602 trees. Mahoning County reported 64,118 peach trees and Columbiana County, 58,539.

Method of Study

The retail survey was conducted during the weeks of August 8, 15, 29, and September 5, 1949. No survey was made the week of August 22 because a small volume of peaches was expected from local sources. It must be kept in mind that stores displayed lots of peaches other than those observed at the time the stores were visited.

In selecting a sample of retail stores in each of the four cities, the aid of the Secretary of the Retail Grocers Association was enlisted. An effort was made to select a representative sample of each type of store in the area studied. Headquarters for each chain operating in this area was visited and the management was asked to cooperate in the study. Each of the stores selected in the four cities was visited once during each week.

Seventy-one independent stores, 17 chain stores of four chain organizations, and three fruit and vegetable stores were selected and visited as shown in Table 1.

TABLE 1. Number of Stores Studied by Types and Weeks, Canton-Youngstown Area. August and September, 1949

Type of Store	Number of stores studied, week of			
	August			September
	8	15	29	5
Independent				
Small	31	33	34	34
Large	33	35	37	36
Chain	15	15	17	14
Fruit and vegetable	2	3	3	3
Roadside stand	2	7	15	2
Total	83	93	106	89

The independent stores were further classified as "large" and "small" depending on total floor space of the produce department. Those independent stores with produce sections of less than 150 square

feet were classified as "small" and those 150 square feet or more as "large." All the chain operations studied were of the supermarket type, since chain service stores were practically non-existent in this area. Three of the chain organizations made available their records; in the fourth, only store observations were made.

Operations were observed in only 83 of the stores during the first week of the survey because of the limited time and, on a few occasions, stores were omitted because of remodeling or for some other reason.

Twenty-six roadside operations were observed during the 4 weeks. This included six growers who sold in the orchard or at a packing shed, seven growers who operated roadside stands, ten roadside stands operated by persons other than growers, and three truckers selling along the road.

DESCRIPTION OF PEACHES OFFERED CONSUMERS

Early in the marketing season, competition was less than normal from most areas other than Southern Illinois. The Southern crop, which usually competes with early local peaches, was far below normal. For example, the 1949 Georgia peach crop was 62 percent below the 10-year, 1938-47 average.* The South Carolina crop was 32 percent below the 10-year average. The later varieties, such as Gary and Elberta, grown in the area studied, were on the market in competition with peaches from Illinois and Michigan, as well as those from the Ottawa and Lake County area.

Source

In the four-week period studied more than half of the lots of peaches displayed in all types of stores were supplied from nearby states, including Illinois, Michigan, Indiana, New York, Pennsylvania, West Virginia, Missouri and Arkansas. Local peaches made up between 15 and 22 percent of the displays in independent stores, while none were observed in chain stores during this study. Peaches from other areas in Ohio† made up 9 to 10 percent of the displays in independent and 17 percent in chain stores. Peaches from the South and California made up a small proportion of total displays in all types of stores.

Peaches from areas in Ohio other than the Canton-Youngstown area (largely Ottawa and Lake counties) did not make up a sizable proportion of the displays in any type of store until late in the peach season.

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*Crop Production, Crop Reporting Board, Bureau of Agricultural Economics U. S. D. A., Annual Summary, 1949.

†Included peaches from counties other than Columbiana, Mahoning, Stark and Carroll. Most of the peaches from "other areas" came from Ottawa County.

These peaches were not observed in chain stores during the first two weeks of the study, but made up 28 and 43 percent of the total peach displays in this type of store during the weeks of August 29 and September 5, respectively. Increases in the proportion of displays from this area were also observed in independent stores during the last two weeks of the study.

Southern peaches made up about one-fifth of the displays in small and large independent stores during the week of August 8. After the week of August 8, however, Southern peaches were of minor importance. Only six displays of California peaches were observed in the stores during the period of this study. The local area became an important source of peaches for the large independent stores during the week of September 5, when about one-fourth of the displays and more than one-half of the quantity displayed was from local orchards. Peaches from other Ohio sources made up about 43 percent of the displays and 44 percent of the quantity displayed in chain stores during the same week. The proportion of peach displays in chain stores from nearby states declined from about 80 percent early in the study to 50 percent during the week of September 5.

Of three truckers observed selling at roadside, two were obtaining supplies from Michigan, while the third was bringing in peaches from Ottawa County. Four of the commercial roadside stands visited were trucking in peaches from other areas. Two were buying in Lake County, one in Ottawa County and one in Virginia.

Attractiveness

Each display was rated according to its attractiveness. Such factors as general appearance, color and condition of the fruit, prominence of the display and supporting store advertising were considered in this rating.

The six displays of California peaches rated higher than displays of peaches from other areas in terms of appearance. Peaches from other Ohio sources rated lowest, primarily because they were relatively green.

An improvement in the appearance of local peaches was evident as the Elberta and Gary varieties replaced earlier varieties on display in the stores. Local peaches were rated more attractive during the weeks of August 29 and September 5 than peaches from other sources, except for the single display of California peaches during the latter week.

Condition

Early in the season local peaches rated relatively low in condition, as indicated by freedom from brown rot and other diseases, insect injury, shrivel and bruises, but high during the latter part of the study. This

improvement in condition probably was due largely to a decrease in the amount of brown rot observed. Peaches from nearby states rated about average during the first three of the four weeks and somewhat lower during the last week. The peaches from other Ohio sources, largely Ottawa and Lake Counties, were consistently in poorer condition than those from local sources. Because of immaturity at picking time, the skins were often "rubbery", some showed shrivel and a few failed to ripen in the stores.

The condition of peaches sold at roadside varied with the types of operation. Of the 15 grower's displays observed, 12 displayed peaches of good condition, two displayed peaches in poor condition and one in fair condition.

Three lots of peaches displayed by roadside stands not operated by growers rated poor in condition and the other three observed were in good condition. One of the lots of peaches in poor condition was purchased in Virginia as it came off the eliminator of the grader. This fruit was very small, had some insect injury, was not defuzzed or clean, but was firm and suitable for canning if time was spent in preparation.

Peaches displayed by truckers were in poor to fair condition. This fruit was brought in from other producing areas and none of that observed was graded. The fruit was of all sizes, was not defuzzed or cleaned, and contained some insect injury. It was, however, firm, reasonably free from brown rot and of good color.

Size

Nearly one-third of the displays of peaches from local growers were unsized and 10 percent were of 1¾ inch minimum. Peaches from other areas in Ohio (largely Ottawa and Lake Counties) were predominantly of a 2-inch minimum. Only 13 percent of the peaches from this source were 2¼ inches or more in minimum size, while about one-third of the displays from nearby states, local, and southern areas were of this size. All peaches from California were 2½ or more inches in diameter. One-fourth of the peaches from southern areas were 2½ inches in diameter or larger.

Degree of Ripeness

More than one-half of the displays in all types of stores during the study were rated as having full yellow undercolor. Peaches were examined for undercolor and classified as "green", "green-yellow" "yellow-green" and "yellow." "Green" peaches were those that were green with no trace of yellow undercolor. The term "green-yellow" was used when the peaches were predominantly green, but contained a small

amount of the yellow undercolor. "Yellow-green" peaches were predominantly yellow with a small amount of green, and "yellow" peaches were entirely yellow with no green undercolor evident.

The tendency of growers to pick their peaches before maturity with the hope of getting better prices and to extend the picking season can be seen by comparing undercolor during the first week with that during later weeks. This was true of peaches from each of the producing areas. About 30 percent of the displays of peaches were of a full yellow undercolor during the week of August 8, while during the last two weeks approximately 70 percent of the displays were of a full yellow undercolor. Those peaches that had been shipped from California were, in all cases, of full yellow undercolor. Local peaches were ripened to a higher degree than those from sources other than California. In general, a smaller proportion of the displays of peaches from other Ohio sources (largely Ottawa and Lake Counties) were of full yellow undercolor than the peaches from other important producing areas.

Extent of Defuzzing

One noticeable difference between local peaches and those from other areas observed in the retail stores was that of defuzzing. While all the displays of peaches from California and 92 percent of those from nearby states were brushed and clean, only 10 percent of the displays of local peaches were defuzzed. This detracted considerably from the appearance of the local fruit. About 90 percent of the displays from other Ohio sources and the South were defuzzed. There was displayed an occasional lot of peaches from Virginia that had been trucked into Ohio, ungraded, with the fuzz left on.

MERCHANDISING PRACTICES

The effectiveness of the merchandising programs employed to move peaches varied greatly between retailers. Peach sales varied from one-half bushel during the entire season in one store to 150 bushels per week during a four-week period in another.

Displays

A large percentage of stores of all types had peaches on display when visited. During each week of the study, 84 percent or more of the small independent stores and 95 percent or more of the large independents had peaches on display when visited. All of the chain and fruit and vegetable stores had peaches displayed when visited.

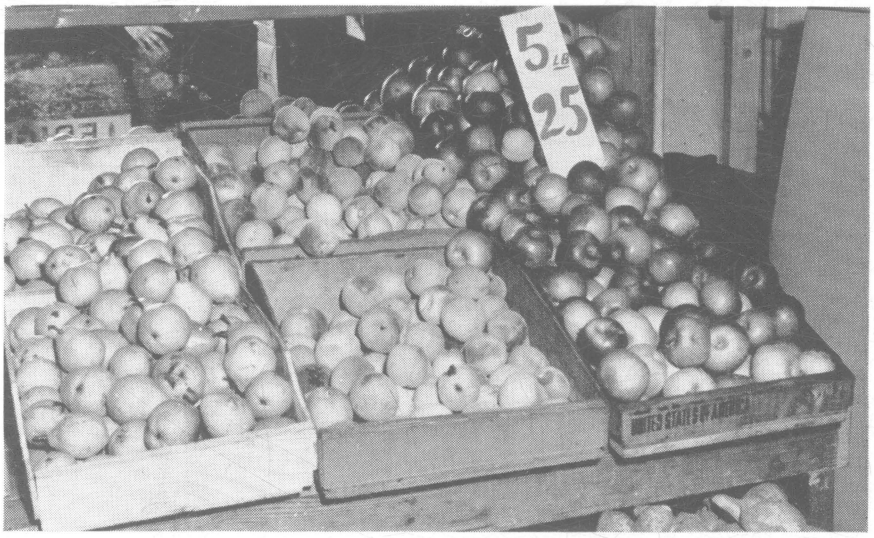

Fig. 1.—(Left to right.) Pears, peaches and apples. Note the lack of price marking and type of display.

Method of Display

One-half to two-thirds of the displays in independent stores were offered for small unit sales from original containers. A few small independents were displaying peaches in flat boxes or four-quart baskets placed on display islands or racks (Fig. 1). Few independent retailers were offering peaches in bushel units. In the large independents, about one-half of the displays were in original containers for small unit sales, while over one-third were mass bulk displays in produce racks or display islands. Where the same peaches were offered for both bushel and small unit sales they were classified only as bulk.

The chain stores were using display islands or produce racks for bulk sales in over 90 percent of their displays. A few transparent bags of prepackaged peaches were displayed with the bulk peaches in some stores.

Two-thirds of the small independents were displaying peaches in the original baskets, partly because the limited floor space did not permit large bulk displays and because peaches could be placed in the cooler over night with minimum handling. These baskets were usually placed on the floor or window sill for display. They were frequently found in obscure places. Many of these retailers were placing the peaches on the steps in front of the store (Fig. 2). In some cases these peaches were observed in the direct sunlight at a time when the air temperature was

Fig. 2.—Peaches displayed in a large independent store. The display was arranged with mirrors to give the illusion of a large quantity and price was plainly marked.

90° F. Some large independent retailers were displaying peaches in a tilting mass display to give the illusion of a greater quantity, while others were displaying peaches in baskets outside the stores (Fig 3).

Few stores displayed peaches in refrigerated cases. Only about three percent of the displays in independent and chain stores were refrigerated. Retailers apparently were not convinced that refrigerated display cases were necessary for peaches.

Quantity Displayed

Fruit and vegetable stores displayed more than twice as many peaches as any other type of store studied during the four week period, displaying an average of from 6 to 13 bushels per store during the study. Small independent stores displayed an average of about one-half bushel per store throughout the entire period, while the amount displayed in large independent stores increased from an average of 1.6 bushels during the week of August 8 to 3.3 bushels during the week of September 5.

The greatest emphasis on quantity displays in chain stores was during the week of August 29, when an average of more than four bushels were displayed per store, as compared with approximately two and one-half bushels during other weeks.

Attractiveness of Display

Although there was considerable difference among types of stores, there was a remarkable consistency in the display ratings of each type during the entire period studied (Table 2). Displays in fruit and vegetable stores rated highest in terms of attractiveness, averaging 3.0 out of a possible 4.0. The color and condition of the fruit displayed and prominence of the displays in these stores resulted in consistently high ratings. Chain store displays rated second in attractiveness. Small independent stores rated lowest, many of them displaying a basket of peaches in some inconspicuous spot on the floor.

Grades Displayed

None of the lots of local peaches observed in the stores during this study was marked as U. S. No. 1 or better (Table 3). One lot observed was graded "Domestic" and all other local peaches, except those for which the grade was unknown, were marked "Growers Grade". * In most cases in which local peaches were listed as "Grade Unknown", the containers were not marked and the fruit was apparently ungraded or graded according to the individual growers specifications. In the cases of peaches from other production areas classified as "Grade Unknown", the retailer had mislaid or destroyed the lid of the basket on which the

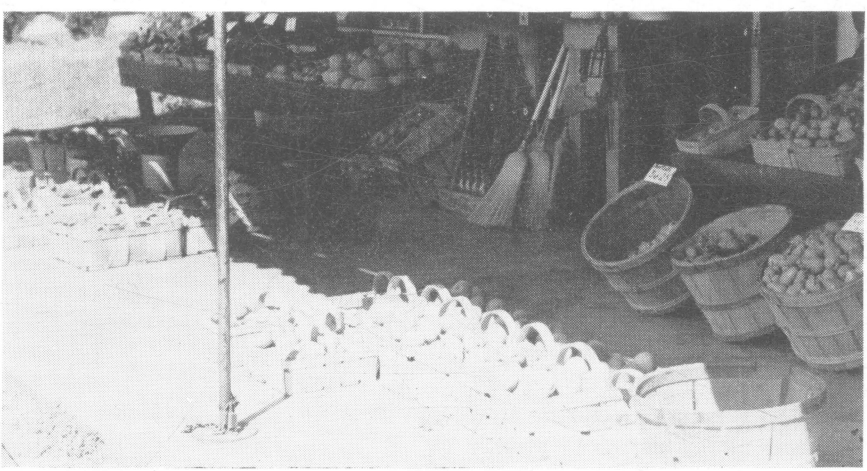

Fig. 3.—Peaches displayed in front of a large independent store.

* "Growers Grade" was used for peaches graded according to standards established by growers or for ungraded or orchard run fruit. This grade was eliminated by the "Ohio Fruit and Vegetable Law", 1949. Federal grades were adopted with the passage of this law.

TABLE 2.—Rating of Displays of Peaches According to Attractiveness by Type of Store and Weeks
Canton-Youngstown Area, August and September, 1949

(4 = excellent, 3 = good, 2 = fair, 1 = poor, 0 = very poor)

Type of store	Week beginning								Average all weeks
	August 8		August 15		August 29		September 5		
	Displays	Rating	Displays	Rating	Displays	Rating	Displays	Rating	
Independent									
Small	29	2.0	29	2.1	33	1.9	29	2.0	2.0
Large	38	2.4	44	2.3	52	2.7	40	2.6	2.5
Chain	15	2.7	16	2.7	18	2.8	14	2.5	2.7
Fruit and Vegetable	3	3.3	5	3.0	3	2.7	4	3.0	3.0

TABLE 3.—Proportion of Displays From Various Producing Areas by Grade
Canton-Youngstown Area, August and September, 1949

Source	Number of displays	Percentage of lots by grade					
		U. S. Grade		Utility	Domestic	Ungraded or growers	Unknown
		Fancy	No. 1				
Ohio, nearby	58	....	....	....	1.7	72.4	25.9
Ohio, other	41	....	61.0	....	....	12.2	26.8
Nearby states	218	....	47.2	1.0	....	....	51.8
Southern	22	..	40.9	....	....	....	59.1
California	6	50.0	16.7	....	....	..	33.3
Unknown	18	....	39.3	....	....	7.1	53.6
Total	363	0.8	39.9	0.6	0.3	23.8	34.6

grade was marked. These peaches were mostly from commercial packs and probably were graded. Of those for which the grade was known, most were marked U. S. No. 1. Three lots from California were the only peaches marked as U. S. Fancy.

It was evident that most local fruit was not bought on a basis of grade. Retailers were purchasing from local growers largely on a basis of reputation and inspection.

Sales Units

The smaller stores sold peaches in smaller units of sale. Small independent stores were selling peaches mostly in two- and three-pound units, large independents in two to four pound units, and chain stores in three and four pound units (Table 4). The predominant sales unit was three pounds in all types of stores. Where lots of peaches were offered both in bulk and bushels, the unit of sale was reported for bulk. A number of the chain stores and some large independent stores were selling peaches in bushel lots in addition to the bulk sales.

The 12-quart basket, observed in the stores and roadside stands of this area, was used almost entirely for local fruit. The size of this basket is an odd size, being halfway between the standard half-bushel and peck size. It was apparent in talking to some retailers that they had the false conception that these twelve-quart baskets were one-half bushel in size. conception that these twelve-quart baskets were one-half bushel in size and paid for them on that basis. This container was a convenient unit for the small retailer whose turnover was too slow to permit purchasing in bushel quantities.

Few local growers were selling peaches in small units at roadside. Two were selling in 4-quart units, two in 2-quart units, and one was selling by the pound. Most local fruit sold at roadside was offered in 12-quart, half-bushel or bushel sizes. Only three lots displayed in peck baskets were observed.

Advertising

The small independent stores did not indicate price on about three out of every four lots observed (Table 5). Where price was indicated on the display, some advertising was often incorporated with the price sign. This was limited largely to the words "Peaches", "Special", or "Fresh Peaches" and was often done with crayon on a small piece of cardboard. The size of these signs averaged only 29.7 square inches or about five by six inches.

The large independent stores did not indicate price on about one-third of the peach displays. The majority of those indicating price also used some promotional advertising. The prices were usually in plastic

TABLE 5.—Proportion of Stores Indicating Price on Display, Using Advertising on Displays and Amount of Advertising Space Used, by Type of Store

Canton-Youngstown Area, August and September, 1949

Type of store	Number of displays	Price not indicated	Display advertising	
		Percent	Percent of displays	Average size (square inches)
Independent				
Small	120	73.3	19.2	29.7
Large	173	35.8	46.2	152.8
Chain	64	17.2	70.3	199.9
Fruit and vegetable	15	13.3	73.3	364.7

letters on regular price holders. There were a number of retailers displaying large, effective promotional posters. The average size of promotional posters in large independents was 152.8 square inches or approximately 12 by 13 inches.

The price was marked on all but 17.2 percent of the peach displays observed in chain stores. Chain stores used in-store advertising with a great deal of uniformity. Nearly all the placards used carried promotional slogans such as "Ripe Juicy Elbertas", "Good for Canning or Eating", and "Luscious Elbertas." These were usually placed on a standard about 12 by 14 inches in size. The average of all display advertising in the chain stores was nearly 200 square inches.

Fruit and vegetable stores displayed price on most peach displays. Large signs were often used in front of stores to attract customers.

The most important newspaper in each of the cities was obtained during the period of the study and total column inches of advertising for fresh peaches, canned peaches, and fruit and vegetables was measured for all food stores. The column inches of peach advertisements by growers and other operators of roadside stands was also measured from the classified section.

In general, fruit growers and other roadside operators were using more column inches of advertising for roadside sales of peaches than any other type of retailer (Table 6). Some types of stores were devoting almost as much, or more, space to canned peaches as they were to fresh peaches. With the exception of chain stores which devoted nearly one-fourth of their produce advertising to fresh peaches during the week of August 28 to September 4, most types of stores devoted less than 12 percent of their produce advertising space to peaches during each week of the study.

Of the independent retailers reporting, 37 were advertising in newspapers, nine were using handbills, three were using radio announcements and one was mailing cards, while 21 did no advertising. Some stores reported both newspaper advertising and handbill or radio advertising. Most of the stores not advertising were small. Nearly all the stores advertising were using newspaper ads once weekly.

Many of the retail stores visited were promoting the commercial pack of canned peaches during the fresh peach season. Retailers explained that during the fresh peach season customers were thinking about peaches. They considered that it was good merchandising to push canned sales at a time when they moved fastest. One small retailer who was not actively advertising canned peaches stated that he averaged two or three cases of canned peaches a month throughout the year, but during the local peach season he moved five or six cases a month.

TABLE 6.—Column Inches of Fresh Fruit and Vegetable, Canned Peach and Fresh Peach Advertising, All Food Retailers, 4 Newspapers, by Type of Retailer and Weeks

Canton-Youngstown Area, August and September, 1949

Type of retailer	Total fresh fruits and vegetables	Canned peaches	Fresh peaches
	Week of August 8-14		
Independent	113.0	10.0	12.3
Voluntary chain	164.0	3.0	1.5
Chain	52.0	6.5	4.3
Roadside	*	*	29.2
	Week of August 15-21		
Independent	198.8	12.8	23.5
Voluntary chain	62.0	4.3	13.0
Chain	137.0	5.5	12.5
Roadside	*	*	45.6
	Week of August 22-27		
Independent	240.0	12.0	25.3
Voluntary chain	63.0	5.0	6.5
Chain	100.0	9.0	9.8
Roadside	*	*	22.4
	Week of August 28-September 4		
Independent	148.5	8.5	16.3
Voluntary chain	53.0	7.5	5.3
Chain	142.0	31.8	32.3
Roadside	*	*	35.9

*Only advertising space for peaches was measured for roadside operators.

Prices and Margins

The price paid as well as the selling price was obtained on the displays of peaches observed throughout the season.

Prices Paid by Retailers

During the four week period studied, small independent retailers paid an average of $2.83 per bushel for peaches, while the price paid by large independents averaged $2.78. Fruit and vegetable stores paid an average of $2.50 per bushel. Prices paid by chain stores were obtained from only three of the four chains in which displays were observed. The average price paid by chain store organizations was $2.84 per bushel. When the price paid by chain stores was adjusted upward by 10 percent for the wholesaling function performed by the warehouse, the average price paid by chain stores was $3.12 per bushel during the period studied.

Retailers were paying nearly the same average price for local peaches (Ohio, nearby) as those shipped in from nearby states. This seems to indicate that the factor of ripeness, characteristic of local fruit, is considered by some retailers to be as important as the uniformity and defuzzing which is characteristic of peaches from other areas.

Local growers were often charging retailers as much for peaches as they received by selling retail at roadside. During the period studied, all retailers paid an average of $2.74 for peaches from the local production area. For comparable quality peaches, growers received an average of $3.00 per bushel on four lots of peaches during the week beginning August 15 and $2.75 for 16 lots the week of September 5 by selling directly to consumers at roadside or in the orchard.

Selling Prices

Small independent stores were charging somewhat higher average prices for peaches than other types of stores. Prices of peaches from all sources varied from an average of 10 cents per pound in small independent stores to 9.4 cents in large independents, 9.5 cents in chain stores and 8.6 cents per pound in fruit and vegetable stores.

The average price of the peaches from other areas in Ohio (largely Ottawa and Lake Counties) was lower than that of peaches from other sources in all types of stores. California peaches were by far the most expensive peaches displayed. Local peaches were selling at about the same price as peaches from nearby states.

Roadside stands usually offered peaches of different quantities and sizes. The average price of 16 lots rated as "good" was $2.75 per bushel. Three lots rated as being in "poor to fair" condition sold for an average of $2.70 per bushel. During the same week, one large independent store

was selling U. S. No. 1 peaches from Michigan at $2.00 per bushel, a fruit and vegetable store was selling U. S. No. 1 peaches at $2.75 and one small independent was selling peaches from a nearby state at $3.50 per bushel. At a time when several growers were getting $1.25 for 12 quart baskets, two retailers were selling local peaches in 12 quart baskets at $1.30. During this week, three truckers were selling peaches from Michigan and Ottawa County at an average of $1.80 per bushel. The quality and condition of these peaches were better than the three lots of poor to fair fruit displayed by growers, but were not of as high a quality as those of local growers that were rated "good."

Five of the thirteen growers selling at roadside were requesting that customers bring their own containers. A charge of 10 cents was usually made if the customer used the grower's basket. One trucker was making the same resquest. In discussing this practice with growers, the opinion was expressed that customers like the practice and seem to think they are getting a "bargain". One commercial operator of a roadside stand was also requesting that customers bring their containers.

The prices charged by operators of roadside stands, other than growers, averaged $2.26 per bushel for seven lots. One of these was small fruit from Virginia selling at $1.98 per bushel.

Margins*

Small independent stores were taking somewhat larger margins on peaches than other types of stores. The gross margin taken by small independent retailers averaged 41 percent compared with 38.3 percent by large independents and 31.6 percent by chain stores. The average margin taken on 11 lots in the three fruit and vegetable stores was 39.5 percent on small unit sales.

The relative difference in margins taken by the various types of stores for peaches of similar quality is shown from margins taken on peaches from nearby states. The margins on peaches from nearby states were: 39.6 percent by small independents, 39.1 percent by large independents and 32.0 percent in chain stores. The margin taken on six lots sold in small units in the three fruit and vegetable stores amounted to 43.8 percent. The margins taken on peaches from nearby states by fruit and vegetable stores are not comparable with those for other types of stores. The prices paid by these stores were, in some cases, at the farm before cost of transportation was added.

*Margins were computed by dividing the cents per pound marked up by the selling price per pound. No allowances were made for spoilage losses. Realized margins would, of course, be smaller. The price paid per pound was computed by dividing bushel prices by 48 pounds.

In general, margins taken on local peaches (Ohio, nearby) were somewhat higher than those on peaches from other sources. This might be explained by the fact that retailers were attempting to compensate for any spoilage losses resulting from the ripeness of local peaches.

Margins taken on the high priced fruit were larger than they were on the low priced fruit. As will be shown later, fruit selling at higher prices was generally in a more advanced stage of ripeness. Retailers may have taken larger margins on this fruit with the expectation of greater spoilage losses than on less mature fruit.

As the price of peaches in retail stores declined during the latter half of the period studied, retailers took larger margins. The selling price per pound for all peaches in independent stores declined from 11.03 cents per pound during the week of August 8 to 8.76 cents per pound during the week of September 5, while the purchase price declined from 6.92 to 5.11 cents and the mark up from 4.11 to 3.65 cents per pound. In terms of bushel prices this was a reduction of $1.09 in selling price. Eighty-seven cents of this reduction was accounted for by lower price of the fruit to the retailer, while 22 cents represented a decline in the mark up.

HANDLING PRACTICES

The handling practices studied were the degree of ripeness in which retailers handled peaches, the length of time peaches were held in stores, and the place at which peaches were purchased.

Degree of Ripeness in which Peaches were Handled

Observations of the degree of ripeness of peaches handled by retailers indicated that there were two schools of thought among retailers. One group apparently thought that peaches should be handled as nearly full ripe as possible and that rapid turnover would prevent spoilage losses. The other group considered that handling ripe peaches results in a high spoilage loss and preferred to deal with less mature fruit that would be sold by the time it became ripe.

Fruit and vegetable stores were offering peaches in a more advanced stage of ripeness than other types of stores. Three-fourths of the displays of peaches in fruit and vegetable stores were classified as having full yellow undercolor, compared with one-half of the displays in chain stores and between 55 and 60 percent of the displays in independents.

Peaches in fruit and vegetable stores were sold largely in bushel or 12-quart lots and required less handling than peaches in other stores,

enabling these operators to purchase peaches in a more mature stage. In the chain stores a slight tendency to display peaches with lesser degrees of yellow was noticeable.

Length of Time Held in Store

Large independent stores held peaches in the store longer than the other types of stores. These retailers were purchasing in larger quantities than the small independents and were holding the reserves in coolers. The chain store policy was to supply stores largely on a daily basis by the chain warehouse, but in three of the four weeks studied, lots had been in the stores an average of 1.5 to 1.9 days. In general, the fruit and vegetable stores studied were keeping peaches in the stores a shorter length of time than other types of stores. In most cases, large independents and chains added to their peach displays through the day with reserves from a cooler.

Place of Purchases

Most independent retailers bought local peaches directly from the grower. Nearly three-fourths of the lots of local peaches handled by large independents were purchased from growers, in most cases at the store. Small independent retailers purchased slightly more than half of their supply of local peaches directly from the grower at the store or at the farm. The remainder was purchased on the Youngstown Farmers Market, either from growers or dealers. Growers conducting a store delivery service were delivering mostly to the larger independents. These growers were making two or three deliveries each week.

Peaches from sources other than the local area were almost exclusively being supplied by a jobber or wholesaler. A few lots in small independent stores were supplied by truckers. Chain stores were being supplied by their respective warehouses.

SALES

The fruit and vegetable stores studied sold more than twice as many peaches per store as any other type of store (Table 7). The small independent stores averaged from about four to five bushels of peaches per week during the study, while the large independent stores were selling about four times that amount per store. The chain stores were selling a somewhat greater volume per store than large independents.

The majority of peaches sold during the week of August 1 were from Southern sources, when they made up from about one-half to two-thirds of the total volume sold in the different types of stores. After that week,

TABLE 4.—Proportion of Lots Offered in Various Units of Sale by Type of Store
Canton-Youngstown Area, August and September, 1949

Type of store	Number of lots	Percentage of lots by units of sale								
		1 lb.	2 lb.	3 lb.	4 lb.	5 lb.	6 lb.	8 qt.	12 qt.	Bu.
Independent										
Small	117	10.3	25.6	53.8	6.8				0.9	2.6
Large	173	8.1	14.4	52.0	14.4	1.2		0.6	2.9	6.4
Chain	64	3.1	7.8	48.4	34.4	1.6	4.7			
Fruit and Vegetable	15		20.0	46.6	6.7			6.7		20.0

TABLE 7.—Weekly Peach Sales Per Store by Type of Store
Canton-Youngstown Area, August and September, 1949

Week beginning	Type of store								
	Independents				Chain		Fruit and vegetable	
	Small		Large					
	Number of stores	Bushels sold	Number of stores	Bushels sold	Number of stores	Bushels sold	Number of stores	Bushels sold
August 1	23	3.9	33	16.7	6	17.7	2	37.5
August 8	29	4.0	30	16.7	7	19.4	3	75.0
August 15	12	4.8	18	18.9	6	21.2	3	75.0
August 22	29	5.3	33	23.9	9	18.1	3	86.7
August 29	26	4.8	33	20.6	9	44.2	2	108.3

however, Southern peaches became of minor importance. From August 8 to September 4 peaches from nearby states made up the largest proportion of sales in each type of store.

Although small independent retailers reported that local peaches made up 21 percent of the total sold from August 1 to September 5 and large independents only 11.2 percent of the total, large independent retailers sold more than twice as many local peaches per store as the small independent stores.

Four operators of roadside stands who were not growers reported sales averaging 214 bushels each for the week of September 5. Of five growers selling at roadside during the week of August 15, three reported sales of 70 bushels a week, one reported selling 140 bushels in four days and one, 80 bushels per day. During the week of September 5, sales of five growers averaged 81 bushels. Two growers reported a season total averaging 800 bushels. One grower interviewed stated he could have sold 1,000 bushels per week if they had been available. This grower inserted one advertisement in the local paper at the beginning of the season and cancelled all other ads when he could not supply the demand.

Only two truckers reported sales. Their average sales were 512 bushels per week.

QUALITY-PRICE RELATIONSHIPS

In order to determine the relationships between selling price of the peaches displayed and certain quality factors, the lots of peaches were grouped in three price categories, "low", "medium", and "high".

There was no consistent relationship between price and condition of fruit, as indicated by freedom from brown rot, bruises, insect injury and cuts. However, a considerably greater proportion of the displays in the highest priced category were rated good than in each of the other price categories during the last two weeks of the survey when peach prices were lower.

A relationship generally existed between degree of ripeness and selling price. Peaches having full yellow undercolor sold at higher prices than less mature fruit. Of all observations made during the study, about one-half of the displays in the lowest price category were rated as having a full yellow undercolor, while nearly 60 percent of the displays of the medium and high priced peaches were rated as having full yellow undercolor. In general, higher priced fruit was in a more advanced stage of ripeness than lower priced fruit throughout the study.

SPOILAGE LOSSES

Spoilage losses per bushel varied from an average of 4.5 pounds during the first week of the study to 2.6 pounds during the last week. In general, spoilage losses were greater on the more expensive fruit than on the cheaper fruit. This might be expected since the more expensive fruit was that more nearly mature and more subject to spoilage.

Estimated spoilage loss for certain varieties is shown in Table 8. The reports of both large and small independents were combined. Greater spoilage losses were reported for the earlier varieties of Hale Haven and Golden Jubilee, than were reported for the later varieties. This may have been due to higher temperatures early in the season, as well as varietal difference in firmness of flesh and susceptibility to brown rot. The average store temperature was 86.2° F. during the first week of the season compared with 72° F. during the last week of the survey.

TABLE 8.—Independent Retailers' Estimates of Spoilage Loss per Bushel Canton-Youngstown Area, August and September, 1949

Variety	Number of lots	Estimated loss (Pounds per bushel)
Hale Haven	33	4.1
Golden Jubilee	11	3.8
Elberta and Gary	171	3.6
J. H. Hale	48	2.9

PREFERENCES OR OPINIONS EXPRESSED BY RETAILERS

During the week beginning September 5 independent retailers were interviewed and information was obtained concerning preferences for types of containers, ripeness, size and source of peaches.

TABLE 9.—Type of Container Preferred for Peaches by 68 Independent Retailers Canton-Youngstown Area, August and September, 1949

Container preferred	Retailers responding	
	Number	Percent
Bushel basket	36	52.9
California box	11	16.2
12 quart basket	10	14.7
Half bushel basket	5	7.3
Smaller than bushel	2	2.9
Other	4	6.0
Total	68	100.00

Containers

Slightly more than one-half of the retailers stated that they preferred bushel baskets as a wholesale container for peaches (Table 9). Some preferred this container because it had a good resale value. The 23-pound California wooden box ranked second to the bushel basket in preference. Two retailers who specified bushel baskets and half bushel baskets as their preference added, "23 lb. box if priced lower." The 12-quart basket was well liked for local peaches, particularly by the smaller retailers. The fact that there were nearly as many retailers who preferred sizes of containers smaller than the bushel basket as there were preferring the bushel basket indicated that many retailers do not consider the bushel an ideal size for peaches.

Ripeness

Answers to the question of the degree of ripeness in which retailers preferred to receive peaches indicated a tendency for many of them to favor slightly green peaches (Table 10).

TABLE 10.—Degree of Ripeness in Which Retailers Stated That They Preferred Peaches, 69 Independent Retailers

Canton-Youngstown Area, August and September, 1949

Ripeness preferred*	Retailers reporting	
	Number	Percent
Hard and green	2	2.9
Slightly green, before turning	18	26.1
Firm, turning ripe	44	63.8
Full ripe	5	7.2
Total	69	100.00

*The enumerator explained to the retailer that "hard green" peaches were those fully green and hard, that peaches which still contained considerable green color and were firm before turning ripe were "slightly green, before turning" and peaches which were firm and turning ripe were "firm turning ripe." Peaches that were "full ripe" were peaches which were becoming soft.

About two-thirds of the retailers stated their preference as "firm, turning ripe", but a significant number stated that they preferred slightly green peaches. Many retailers expressed the opinion that if they purchased peaches that were ripe their losses would be too great. The tendency to purchase green peaches with the expectation that they would be sold before they ripened and spoiled was evident in many stores.

Retailers were also asked in what degree of ripeness they received peaches. About 60 percent reported that they were satisfied with the degree of ripeness in which they received peaches. A few more retailers

reported receiving peaches in a greener state than desired than reported receiving them too ripe. Seven of the 14 retailers who complained about receiving peaches too green, specified that their problem was with shipped-in peaches, while only one retailer specified local peaches as being too green.

Size of Peaches

All retailers stated that they preferred peaches that were two inches in diameter or larger. None of the retailers stated a preference for peaches with a minimum size greater than 2½ inches. About 56 percent preferred peaches of a two inch minimum. Growers who attempt to sell peaches smaller than two inches in diameter probably should look to outlets other than retail stores. One possibility is for the grower to sell small fruit to hucksters or others for distribution in low income areas. That there is a market for fruit of this size was indicated by the fact that small peaches were being brought in from other areas for sale during the local peach marketing season.

Unit of Sale

Retailers were questioned to find in what units the customers actually purchased peaches and their preferences as to sales units. They were almost unanimous in stating that in most cases customers purchased the number of pounds marked on the display. Some retailers placed an upper limit of 29 cents per sale while a few stated that 35 cents was the point beyond which consumers would not go, in taking the quantity marked on the display.

Sources of Peaches for Canning

About half of the retailers recommending peaches for canning, suggested those from sources other than local orchards. Many retailers do not handle peaches for canning. Some retailers who did not handle or recommend peaches for canning complained that they could not compete with roadside sales of peaches. They stated that growers were attempting to sell to the retailer and to the consumer at the same price. Ten of the 17 retailers recommending local peaches for canning stated factors concerning ripeness as being their reason for making such a recommendation. Peaches from nearby states were recommended by retailers because of "holding quality" or "better grade and defuzzing." One retailer recommended them because they were "better publicized" than local peaches.

Quality of Local and Shipped-in Peaches

Retailers were asked to compare the quality of local peaches with that of peaches from other areas. Twenty-two retailers indicated that local peaches were better than shipped-in peaches and 28 indicated that shipped-in peaches were better than local. Ten retailers said they were both the same. From comments made by many retailers, it was evident that they generally agreed upon the following:

1. That local fruit was not as well graded, sized, defuzzed, and packed as attractively as peaches from other areas.
2. That local fruit rated high in "taste appeal" but often low in appearance which was important in boosting sales.
3. That local fruit tended to break down more rapidly than less mature shipped-in fruit.

SUMMARY

The Columbiana-Stark-Mahoning County area is one of the important peach producing areas in Ohio. It is located in an excellent market area.

Retail stores surveyed in this area during 1949 displayed greater quantities of peaches from nearby states than from Ohio or other sources. Peaches from California were of a higher quality in terms of appearance than those from any other source. Peaches from Ottawa and Lake Counties were relatively green. The quality of local peaches sold by retailers improved toward the latter part of the season and sales increased.

Fruit and vegetable stores displayed peaches in larger quantities than other types of stores. The large independent stores appeared to be the major retail outlet for local fruit. Chain stores sold no local peaches, but did handle large quantities from other areas in Ohio late in the season.

Fruit and vegetable stores handled fruit in a more advanced stage of ripeness than other types of stores.

There was little variation in the price received by growers for various qualities of peaches sold at roadside stands. Some growers received higher prices at roadside for ungraded fruit than was paid in some stores for U. S. No. 1 peaches from other producing areas.

Several truckers and roadside stand operators were bringing in ungraded peaches from other production areas and selling them at low prices. It was apparent that there is a market for the small-sized and off-grade fruit in the low-income areas.

Retailers placed almost as much emphasis on advertising canned peaches as on fresh peaches during the local peach marketing season.

Retailers indicated several ways by which they thought growers could improve the marketing of their fresh peaches. The more important were:

1. Do a better job of grading.
2. Pick in a more "firm-ripe" stage. Local peaches were sometimes too ripe for retailers to handle.
3. Brush fruit.
4. Do a better job of distribution. Inform grocers when various varieties will be available, price more fairly and do not try to "dump" on retailers as a last resort.